# Notes from Upper Rio Grande Basin Water Operations Review Interdisciplinary NEPA Team Meeting; December 11, 2003; 1:00 PM; Corps of Engineers Conference Room, Albuquerque

*In Attendance:*

Mike Buntjer, USFWS
John Branstetter, USFWS
Marsha Carra, USBR
Art Coykendall, USBR
Tim Darden, NMDA
William DeRagon, Corps
Ellen Dietrich, SAIC/Corps
Darrell Eidson, Corps
Don Gallegos, Corps
Susan Goodan, SAIC/Corps
Ernie Jahnke, Corps
Conrad Keyes, Jr., Consultant to Corps
Bill Leibfried, SWCA/NMISC
Brian Ortiz, USFWS
Jesse Roach, Sandia National Labs
Gail Stockton, Corps
Valda Terauds, USBR
Jack Veenhuis, USGS

- Valda Terauds chaired the meeting and requested that participants review the draft notes from the October meeting.
- Don Gallegos provided an update on the Planning Model runs and the selected action alternatives to be evaluated by the technical teams. He distributed a handout showing graphs of the 40-year flow sequence at Otowi, and model runs showing evaporation, Compact credit, and Elephant Butte Storage comparisons between Alternative A and others.
  - Draft Alternative A was dropped because the maximum channel capacity of 1200 cfs below Abiquiu would require that the Rio Chama be flowing at capacity (bankfull) most of the time and would cause problems in evacuating the conservation storage from Abiquiu.
  - In evaluating the model runs, Don has found that as water is stored upstream, the evaporation is greater from Abiquiu and El Vado than without the additional storage.
    - Using the standard water accounting method, the accumulated evaporation for Rio Grande water is greater than that for San Juan-Chama water. There was some question about why this is the case. Don will research and provide an answer later.
    - Reviewing yearly evaporation amounts rather than cumulative amounts may help the comparison of evaporation amounts for different water accounts stored upstream.
    - In reviewing the impacts under each alternative, there is a need to look at the total evaporation to determine if water is saved in the system when water is stored upstream.
  - **Question:** Why does Alternative A (normal or 2) have more credit water than Alternative A (wet or 3)?
    - **Answer:** If the reservoir is full in November-December, water cannot be released quickly enough, so there is carryover storage.
  - When considering credit under Alternatives A and C, Compact deliveries are met or exceeded in 35 out of 40 years.
  - Carryover storage is released between November and March in the base run.

- When considering Elephant Butte storage under each alternative, all upstream actions and effects must be taken into account.
- The alternatives selected by the Water Operations Technical Team for analysis by the technical teams all maintain maximum operational flexibility.
  - William DeRagon expressed a concern that this would result in alternatives that only allow technical teams to evaluate the impacts of maximum Abiquiu storage and no conservation water storage at Abiquiu, with nothing in-between.
  - Gail Stockton pointed out the reason for including maximum flexibility under all alternatives is that with the full range of potential reservoir storage or diversions into the Low Flow Conveyance Channel (without imposing less than the maximum amount), water managers can use all of the water that is available. This is a realistic management scenario. Technical teams can evaluate what happens in years when lower flows occur during the 40-year sequence to evaluate a range of storage and flow amounts without requiring less than full flexibility to be part of any alternative.
  - Don distributed the sheets summarizing the draft operational alternatives so the group could review each that was selected for analysis. The Water Operations Technical Team, through their screening process, had selected B3, C3, D3, and E3 (all in the wet range) to take advantage of the full authority and maximum flexibility in the system.
  - There was much discussion of the range of alternatives and whether it was adequate to meet NEPA. Concerns were expressed that the selection of these alternatives would not provide an adequate range of alternatives for the EIS analysis. Just considering the lower amounts of storage or diversions to the LFCC during lower water years would not allow analysis of impacts if storage amounts and diversions were limited to less than full capacity in a wet year.
  - Art Coykendall said that it is important to evaluate diversions to the LFCC that are less than the 2,000 cfs maximum. It may be important to evaluate several caps to LFCC diversions, rather than diverting the flows left after keeping a minimum flow in the Rio Grande.
  - **The consensus after the discussion was that new Alternatives I1, I2, and I3 would be established and evaluated to allow for some caps on Abiquiu storage, Cochiti channel capacity, and LFCC diversions under dry, normal, and wet conditions. C3 would be dropped because it is very similar to E3. The list of the final alternatives is attached to the end of these notes. It was also posted on Team Link after the meeting. Planning Model results will be provided to the technical teams for the new alternatives within a few days.**

- Valda distributed the decision criteria summarized from the Joint Lead Agencies and the Steering Committee. The summary worksheet ranked the decision criteria by fixed points, scaled ratings, and ordinal ranking.
  - All decision criteria on the list have a basis in laws and regulations of the Joint Lead Agencies.
  - The summarized information will be posted on the public URGWOPS web site.
  - William DeRagon recommended that technical teams state their criteria in terms that allow for improvements of resources, not just to meet the basic needs.
- Ellen Dietrich explained that the GIS Technical Team reviewed the data quality matrices submitted by each technical team. She is developing a database that will facilitate comparisons and summaries of data quality across reaches and teams. During the GIS Technical Team review, they discussed the types of entries that should go into each column in the matrix. In order to standardize the entries in each column, GIS Technical Team members will be asking for clarification of some of the entries made by

other teams. No information provided by technical teams will be lost, but some will be moved to other fields.

- **Darrell Eidson reported that the Geomorphology Technical Team needs assistance from technical teams to select specific locations to be evaluated for bank erosion.**
  - The Riparian and Wetlands Technical Team will select sites of interest that may erode and let the Geomorphology Technical Team know during a planned conference call on Monday, December 15.
  - The Cultural Resources Technical Team will need to provide locations of interest for erosion concerns, possibly after determining the locations where archaeological site concentrations occur near the river.
- **The next Interdisciplinary NEPA Team meeting will be held on January 8, 2004 in the Corps of Engineers conference room.**

**Alternatives to be Evaluated for Upper Rio Grande Basin Water Operations Review and EIS**

Decided at Interdisciplinary NEPA Team meeting, 12/11/03

| Alternative | Operations |
|---|---|
| **B-3** | Heron waivers – Sept. 30<br>Abiquiu storage – 0 - 180,000 ac-ft<br>Abiquiu channel capacity – 1,500 cfs<br>Cochiti channel capacity – 8,500 cfs<br>LFC – 0 - 2,000 cfs<br>Elephant Butte and Caballo protocol/coordination<br>Improved communications |
| **D-3** | Heron waivers – Aug. 31<br>Abiquiu storage – 0 - 180,000 ac-ft<br>Abiquiu channel capacity – 2,000 cfs<br>Cochiti channel capacity – NC<br>LFC – 0 - 2,000 cfs<br>Elephant Butte and Caballo protocol/coordination<br>Improved communications |
| **E-3** | Heron waivers – NC<br>Abiquiu storage – 0 - 180,000 ac-ft<br>Abiquiu channel capacity – 1,800 cfs<br>Cochiti channel capacity – 10,000 cfs<br>LFC – 0 - 2,000 cfs<br>Elephant Butte and Caballo protocol/ coordination<br>Improved communications |
| **I-1** | Heron waivers - NC<br>Abiquiu storage – 0 - 20,000 ac-ft<br>Abiquiu channel capacity – 1,800 cfs<br>Cochiti channel capacity – 7,000 cfs<br>LFC – 0 - 500 cfs (diverted into LFC)<br>Elephant Butte and Caballo protocol/coordination<br>Improved communications |
| **I-2** | Heron waivers – NC<br>Abiquiu storage – 0 - 75,000 ac-ft<br>Abiquiu channel capacity – 1,800 cfs<br>Cochiti channel capacity –7,000 cfs<br>LFC – 0 - 1,000 cfs (diverted into LFC)<br>Elephant Butte and Caballo protocol/coordination<br>Improved communications |
| **I-3** | Heron waivers – NC<br>Abiquiu storage – 0 - 180,000 ac-ft<br>Abiquiu channel capacity – 1,800 cfs<br>Cochiti channel capacity – 7,000 cfs<br>LFC – 0 - 2,000 cfs (diverted into LFC)<br>Elephant Butte and Caballo protocol/coordination<br>Improved communications |
| **Base Run (No Action)** | No Action – No change in operations |